**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

1. (Previously Presented) A method of collecting data about a plurality of samples that possess characteristics that change over time, the samples being contained in an array of containers that are arranged in a container spatial relationship, the method comprising:

displaying for user input a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship; and

accepting user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed wherein the displaying is preceded by:

storing in a database, a plurality of past values of the characteristics of the plurality of samples that were collected during at least one past time interval;

storing in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

applying the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

wherein the displaying comprises displaying the matrix of cells for the at least one target characteristic to be collected in the target samples from which data is to be collected.

2. (Original) A method according to claim 1 wherein the accepting is followed by: storing in a database, the at least one value of the at least one of the characteristics that change over time for the at least one of the samples.

3. (Original) A method according to claim 1 wherein the array of containers includes a plurality of rows and columns of containers in a container spatial relationship and wherein the matrix of cells includes a corresponding plurality of rows and columns of cells in a cell spatial relationship that corresponds to the container spatial relationship.

4. (Original) A method according to claim 1 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the displaying is preceded by: accepting user selection of an array of containers from the plurality of arrays of containers.

5. (Original) A method according to claim 1 wherein the displaying is preceded by: accepting user selection of a characteristic from the characteristics that change over time; and

wherein the displaying comprises displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the characteristic that was selected.

6. (Original) A method according to claim 5 wherein the data entry parameters comprise at least one of a yes/no selection, a data entry box and a pull down menu of selection options.

7. (Original) A method according to claim 5 wherein the accepting user selection of a characteristic is followed by displaying user instructions for obtaining a value of the characteristic that was selected.

8. (Original) A method according to claim 1: wherein the accepting user input comprises accepting user input of a default value of the at least one of the characteristics for the cells of the matrix that is displayed, and accepting user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

9. (Original) A method according to claim 2: wherein the accepting user input comprises accepting user input of a default value of the at least one of the characteristics for the cells of the matrix that is displayed, and accepting user input into at least one of the cells of the matrix that is displayed of at least one value that is different from the default value; and wherein the storing comprises storing in the database, the default value for the cells of the matrix except for the at least one of the cells in which the at least one value that is different from the default value was accepted, and storing in the database, the at least one value for the at least one of the cells.

10. (Original) A method according to claim 2 wherein the following is performed between the accepting and the storing: accepting user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed.

11. (Original) A method according to claim 1 wherein the displaying and accepting are repeatedly performed to collect data for a plurality of matrices of cells that correspond to a plurality of arrays of containers.

12. (Original) A method according to claim 1 wherein the displaying and accepting are repeatedly performed to collect data for a plurality of the characteristics that change over time.

13. (Original) A method according to claim 1 wherein the displaying and accepting are repeatedly performed to collect data over a plurality of sequential time intervals.

14. (Cancelled)

15. (Previously Presented) A method according to claim 1 wherein the displaying is followed by: accepting user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and storing in the database, the

at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

16. (Original) A method according to claim 15 wherein the applying, displaying, accepting and storing the at least one value are repeatedly performed in sequence during a plurality of time intervals.

17. (Previously Presented) A method according to claim 1 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples having a value of the characteristic during a past time interval.

18. (Previously Presented) A method according to claim 1 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

19. (Previously Presented) A method according to claim 1 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

20. (Previously Presented) A method according to claim 1 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

21. (Currently Amended) A method of scheduling data collection of characteristics of a plurality of samples, wherein values of the characteristics change over time, the method comprising:

storing in a database, a plurality of past values of the characteristics of the plurality of samples that were collected during at least one past time interval;

storing in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

applying the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

outputting ~~generating~~ user instructions to collect data for the at least one target characteristic to be collected in the target samples from which data is to be collected.

22. (Currently Amended) A method according to claim 21 wherein the outputting ~~generating~~ is followed by: accepting user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and storing in the database,

the at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

23. (Currently Amended) A method according to claim 22 wherein the applying, outputting ~~generating~~, accepting and storing the at least one value are repeatedly performed in sequence during a plurality of time intervals.

24. (Previously Presented) A method according to claim 21 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples having a value of the characteristic during a past time interval.

25. (Previously Presented) A method according to claim 21 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

26. (Previously Presented) A method according to claim 21 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

27. (Previously Presented) A method according to claim 21 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

28. (Previously Presented) A method according to claim 21 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of the characteristic during a past time interval.

29. (Previously Presented) A method according to claim 21 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of a second characteristic during a past time interval.

30. (Previously Presented) A method according to claim 21 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have the characteristic during a past time interval.

31. (Previously Presented) A method according to claim 21 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have a second characteristic during a past time interval.

32. (Currently Amended) A method according to claim 21 wherein the plurality of samples are contained in an array of containers that are arranged in a container spatial relationship, and wherein the outputting ~~generating~~ comprises: displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship; and accepting user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the target characteristic to be collected for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.

33. (Original) A method according to claim 32 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the displaying is preceded by: accepting user selection of an array of containers from the plurality of arrays of containers.

34. (Original) A method according to claim 32 wherein the displaying is preceded by: accepting user selection of a target characteristic from the characteristics that change over time; and wherein the displaying comprises displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the target characteristic that was selected.

35. (Original) A method according to claim 32: wherein the accepting user input comprises accepting user input of a default value of the at least one of the target characteristics for the cells of the matrix that is displayed, and accepting user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

36. (Previously Presented) A method according to claim 32 wherein the following is performed between the accepting and the storing: accepting user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the target characteristics for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.

37. (Previously Presented) A system for collecting data about a plurality of samples that possess characteristics that change over time, the samples being contained in an array of containers that are arranged in a container spatial relationship, the system comprising:

means for displaying for user input a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship;

means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed;

means for storing in a database, a plurality of past values of the characteristics of the plurality of samples that were collected during at least one past time interval;

means for storing in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

means for applying the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

wherein the means for displaying comprises means for displaying the matrix of cells for the at least one target characteristic to be collected in the target samples from which data is to be collected.

38. (Original) A system according to claim 37 further comprising: means for storing in a database, the at least one value of the at least one of the characteristics that change over time for the at least one of the samples.

39. (Original) A system according to claim 37 wherein the array of containers includes a plurality of rows and columns of containers in a container spatial relationship and wherein the matrix of cells includes a corresponding plurality of rows and columns of cells in a cell spatial relationship that corresponds to the container spatial relationship.

40. (Original) A system according to claim 37 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the system further comprises: means for accepting user selection of an array of containers from the plurality of arrays of containers.

41. (Original) A system according to claim 37 further comprising: means for accepting user selection of a characteristic from the characteristics that change over time; and wherein the means for displaying comprises means for displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the characteristic that was selected.

42. (Original) A system according to claim 41 wherein the data entry parameters comprise at least one of a yes/no selection, a data entry box and a pull down menu of selection options.

43. (Original) A system according to claim 41 further comprising means for displaying user instructions for obtaining a value of the characteristic that was selected.

44. (Original) A system according to claim 37: wherein the means for accepting user input comprises means for accepting user input of a default value of the at least one of the characteristics for the cells of the matrix that is displayed, and means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

45. (Original) A system according to claim 38: wherein the means for accepting user input comprises means for accepting user input of a default value of the at least one of the

characteristics for the cells of the matrix that is displayed, and means for accepting user input into at least one of the cells of the matrix that is displayed of at least one value that is different from the default value; and wherein the means for storing comprises means for storing in the database, the default value for the cells of the matrix except for the at least one of the cells in which the at least one value that is different from the default value was accepted, and means for storing in the database, the at least one value for the at least one of the cells.

46. (Original) A system according to claim 38 further comprising: means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed.

47. (Original) A system according to claim 37 wherein the means for displaying and the means for accepting are repeatedly activated to collect data for a plurality of matrices of cells that correspond to a plurality of arrays of containers.

48. (Original) A system according to claim 37 wherein the means for displaying and the means for accepting are repeatedly activated to collect data for a plurality of the characteristics that change over time.

49. (Original) A system according to claim 37 wherein the means for displaying and the means for accepting are repeatedly activated to collect data over a plurality of sequential time intervals.

50. (Cancelled)

51. (Previously Presented) A system according to claim 37 further comprising: means for accepting user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and means for storing in the database, the at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

52. (Original) A system according to claim 51 wherein the means for applying, the means for displaying, the means for accepting and the means for storing the at least one value are repeatedly activated in sequence during a plurality of time intervals.

53. (Previously Presented) A system according to claim 37 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples having a value of the characteristic during a past time interval.

54. (Previously Presented) A system according to claim 37 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

55. (Previously Presented) A system according to claim 37 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

56. (Previously Presented) A system according to claim 37 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

57. (Currently Amended) A system for scheduling the collection of characteristics of a plurality of samples, wherein values of the characteristics change over time, the system comprising:

means for storing in a database, a plurality of past values of the characteristics of the plurality of samples that were collected during at least one past time interval;

means for storing in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

means for applying the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

means for outputting ~~generating~~ user instructions to collect data for the at least one target characteristic to be collected in the target samples from which data is to be collected.

58. (Previously Presented) A system according to claim 57 further comprising: means for accepting user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and means for storing in the database, the at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

59. (Currently Amended) A system according to claim 58 wherein the means for applying, the means for outputting ~~generating~~, the means for accepting and the means for storing the at least one value are repeatedly activated in sequence during a plurality of time intervals.

60. (Previously Presented) A system according to claim 57 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples having a value of the characteristic during a past time interval.

61. (Previously Presented) A system according to claim 57 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

62. (Previously Presented) A system according to claim 57 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

63. (Previously Presented) A system according to claim 57 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

64. (Previously Presented) A system according to claim 57 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of the characteristic during a past time interval.

65. (Previously Presented) A system according to claim 57 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of a second characteristic during a past time interval.

66. (Previously Presented) A system according to claim 57 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have the characteristic during a past time interval.

67. (Previously Presented) A system according to claim 57 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have a second characteristic during a past time interval.

68. (Currently Amended) A system according to claim 57 wherein the plurality of samples are contained in an array of containers that are arranged in a container spatial relationship, and wherein the means for outputting ~~generating~~ comprises: means for displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship; and means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the target characteristic to be collected for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.

69. (Original) A system according to claim 68 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the system further comprises: means for accepting user selection of an array of containers from the plurality of arrays of containers.

70. (Original) A system according to claim 68 further comprising: means for accepting user selection of a target characteristic from the characteristics that change over time; and wherein the means for displaying comprises means for displaying a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the target characteristic that was selected.

71. (Original) A system according to claim 68: wherein the means for accepting user input comprises means for accepting user input of a default value of the at least one of the target characteristics for the cells of the matrix that is displayed, and means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

72. (Previously Presented) A system according to claim 68 further comprising: means for accepting user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the target characteristics for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.

73. (Previously Presented) A computer program product that collects data about a plurality of samples that possess characteristics that change over time, the samples being contained in an array of containers that are arranged in a container spatial relationship, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to display for user input a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship;

computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed;

computer-readable program code that is configured to store in a database, a plurality of past values of the characteristics of the plurality of samples from which data was collected during at least one past time interval;

computer-readable program code that is configured to store in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be data collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

computer-readable program code that is configured to apply the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

wherein the computer-readable program code that is configured to display comprises computer-readable program code that is configured to display the matrix of cells for the at least one target characteristic to be collected in the target samples from which data is to be collected.

74. (Original) A computer program product according to claim 73 further comprising: computer-readable program code that is configured to store in a database, the at least one value of the at least one of the characteristics that change over time for the at least one of the samples.

75. (Original) A computer program product according to claim 73 wherein the array of containers includes a plurality of rows and columns of containers in a container spatial relationship and wherein the matrix of cells includes a corresponding plurality of rows and columns of cells in a cell spatial relationship that corresponds to the container spatial relationship.

76. (Original) A computer program product according to claim 73 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the computer program product further comprises: computer-readable program code that is configured to accept user selection of an array of containers from the plurality of arrays of containers.

77. (Original) A computer program product according to claim 73 further comprising: computer-readable program code that is configured to accept user selection of a characteristic from the characteristics that change over time; and wherein the computer-readable program code that is configured to display comprises computer-readable program code that is configured to display a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the characteristic that was selected.

78. (Original) A computer program product according to claim 77 wherein the data entry parameters comprise at least one of a yes/no selection, a data entry box and a pull down menu of selection options.

79. (Original) A computer program product according to claim 77 further comprising: computer-readable program code that is configured to display user instructions for obtaining a value of the characteristic that was selected.

80. (Original) A computer program according to claim 73: wherein the computer-readable program code that is configured to accept user input comprises computer-readable program code that is configured to accept user input of a default value of the at least one of the characteristics for the cells of the matrix that is displayed, and computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

81. (Original) A computer program product according to claim 74: wherein the computer-readable program code that is configured to accept user input comprises computer-readable program code that is configured to accept user input of a default value of the at least one of the characteristics for the cells of the matrix that is displayed, and computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed

of at least one value that is different from the default value; and wherein the computer-readable program code that is configured to store comprises computer-readable program code that is configured to store in the database, the default value for the cells of the matrix except for the at least one of the cells in which the at least one value that is different from the default value was accepted, and computer-readable program code that is configured to store in the database, the at least one value for the at least one of the cells.

82. (Original) A computer program product according to claim 74 further comprising: computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the characteristics that change over time for at least one of the samples that corresponds to the at least one of the cells in the matrix that is displayed.

83. (Original) A computer program product according to claim 73 wherein the computer-readable program code that is configured to display and computer-readable program code that is configured to accept are repeatedly activated to collect data for a plurality of matrices of cells that correspond to a plurality of arrays of containers.

84. (Original) A computer program product according to claim 73 wherein the computer-readable program code that is configured to display and the computer-readable program code that is configured to accept are repeatedly activated to collect data for a plurality of the characteristics that change over time.

85. (Original) A computer program product according to claim 73 wherein the computer-readable program code that is configured to display and the computer-readable program code that is configured to accept are repeatedly activated to collect data over a plurality of sequential time intervals.

86. (Cancelled)

87. (Previously Presented) A computer program product according to claim 73 further comprising: computer-readable program code that is configured to accept user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and computer-readable program code that is configured to store in the database, the at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

88. (Original) A computer program product according to claim 87 wherein the computer-readable program code that is configured to apply, the computer-readable program code that is configured to display, the computer-readable program code that is configured to accept and the computer-readable program code that is configured to store the at least one value are repeatedly activated in sequence during a plurality of time intervals.

89. (Previously Presented) A computer program product according to claim 73 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample

based on a percentage of the samples having a value of the characteristic during a past time interval.

90. (Previously Presented) A computer program product according to claim 73 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

91. (Previously Presented) A computer program product according to claim 73 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

92. (Previously Presented) A computer program product according to claim 73 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

93. (Currently Amended) A computer program product that schedules the collection of characteristics of a plurality of samples, wherein values of the characteristics change over time, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to store in a database, a plurality of past values of the characteristics of the plurality of samples that were collected during at least one past time interval;

computer-readable program code that is configured to store in a rule base, a plurality of rules that determine whether a characteristic of a sample is to be collected and, if so, that identify the characteristic which is to be collected, based on values of characteristics of samples;

computer-readable program code that is configured to apply the plurality of rules that are stored in the rule base to the plurality of past values that are stored in the database to identify target samples from which data is to be collected from the plurality of samples and to identify at least one target characteristic to be collected for the target samples that are identified; and

computer-readable program code that is configured to <u>output</u> ~~generate~~ user instructions to collect data for the at least one target characteristic to be collected in the target samples from which data is to be collected.

94. (Previously Presented) A computer program product according to claim 93 further comprising: computer-readable program code that is configured to accept user input of at least one value of the at least one target characteristic to be collected in the target samples from which data is to be collected; and computer-readable program code that is configured to store in the database, the at least one target value of the at least one target characteristic to be collected in the target samples from which data is to be collected.

95. (Currently Amended) A computer program product according to claim 94 wherein the computer-readable program code that is configured to apply, the computer-readable program code that is configured to output ~~generate~~, the computer-readable program code that is configured to accept and the computer-readable program code that is configured to store the at least one value are repeatedly activated in sequence during a plurality of time intervals.

96. (Previously Presented) A computer program product according to claim 93 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples having a value of the characteristic during a past time interval.

97. (Previously Presented) A computer program product according to claim 93 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples having a value of a second characteristic during a past time interval.

98. (Previously Presented) A computer program product according to claim 93 wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples failing to have the characteristic during a past time interval.

99. (Previously Presented) A computer program product according to claim 93 wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples failing to have a second characteristic during a past time interval.

100. (Previously Presented) A computer program product according to claim 93 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of the characteristic during a past time interval.

101. (Previously Presented) A computer program product according to claim 93 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample having a value of a second characteristic during a past time interval.

102. (Previously Presented) A computer program product according to claim 93 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of rules include a rule that begins or terminates collection of a characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have the characteristic during a past time interval.

103. (Previously Presented) A computer program product according to claim 93 wherein the plurality of samples are contained in a plurality of arrays of samples, and wherein the plurality of

rules include a rule that begins or terminates collection of a first characteristic in a sample based on a percentage of the samples in the array that includes the sample failing to have a second characteristic during a past time interval.

104. (Currently Amended) A computer program product according to claim 93 wherein the plurality of samples are contained in an array of containers that are arranged in a container spatial relationship, and wherein the computer-readable program code that is configured to output ~~generate~~ comprises: computer-readable program code that is configured to display a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship; and computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one value of at least one of the target characteristic to be collected for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.

105. (Original) A computer program product according to claim 104 wherein the plurality of samples are contained in a plurality of arrays of containers and wherein the computer program product further comprises: computer-readable program code that is configured to accept user selection of an array of containers from the plurality of arrays of containers.

106. (Original) A computer program product according to claim 104 further comprising: computer-readable program code that is configured to accept user selection of a target characteristic from the characteristics that change over time; and wherein the computer-readable program code that is configured to display comprises computer-readable program code that is configured to display a matrix of cells in a cell spatial relationship that corresponds to the container spatial relationship and that includes data entry parameters for the target characteristic that was selected.

107. (Original) A computer program product according to claim 104: wherein the computer-readable program code that is configured to accept user input comprises computer-readable program code that is configured to accept user input of a default value of the at least one of the target characteristics for the cells of the matrix that is displayed, and computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one value that is different from the default value.

108. (Previously Presented) A computer program product according to claim 104 further comprising: computer-readable program code that is configured to accept user input into at least one of the cells of the matrix that is displayed, of at least one corrected value of at least one of the target characteristics for at least one of the target samples from which data is to be collected that corresponds to the at least one of the cells in the matrix that is displayed.